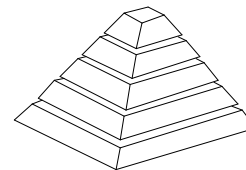


Philips Medical Systems



SERVICE BULLETIN

Issued by : Andreas Maier; PM-B

SB Ref No. : SB86200577

Date : 16 May 2007

Publication No. : N/A

Product Group : 862020

INFORMATION ONLY — NO ACTION REQUIRED

APPLIES TO:

Geography	:	Worldwide
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Traceable Item Identification (12NC) and CMS Product Number	PMS 12NC: 989803106641 989803142101 989803142111 989803002521	CMS (Legacy) Product Number: M3000ATZ M3001A_#A01TZ M3001A_#A02TZ M3001A_#A03TZ
Range of Serial Numbers	N/A.	
Physical Main Block Number(s) (PB), Physical Sub Block Number(s) (SB) and System Code(s) (SC) (Identification where the affected item could be present)	PB017180-PB017078 PB017180-PB017075 SSC=862020	M3001A_#A01TZ, M3001A_#A02TZ, M3001A_#A03TZ M3000ATZ
Commercial (Sales) Product Number	PMS Product Number: 862392 862442	CMS (Legacy) Product Number: M3000A M3001A

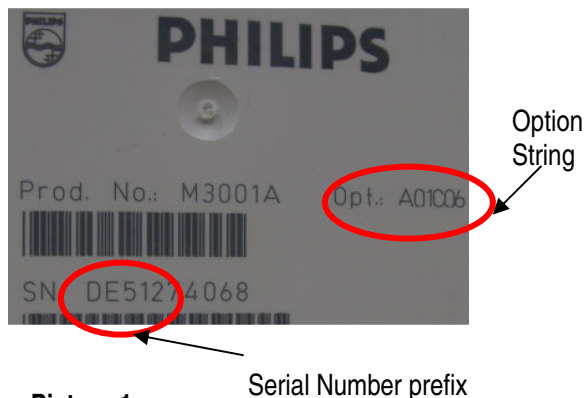
TITLE: SB86200577: M3000A/M3001A NIBP Pump for the MMS is available

SERVICE BULLETIN INFORMATION:

General Information:

The repair strategy for the M3000A and M3001A has been extended. The primary strategy is still unit exchange but in addition to the existing parts the NIBP pump can now be ordered and exchanged. Even for the M3000A the pump is exchangeable. For consistency reasons the M3000A and M3001A are summarized as MMS.

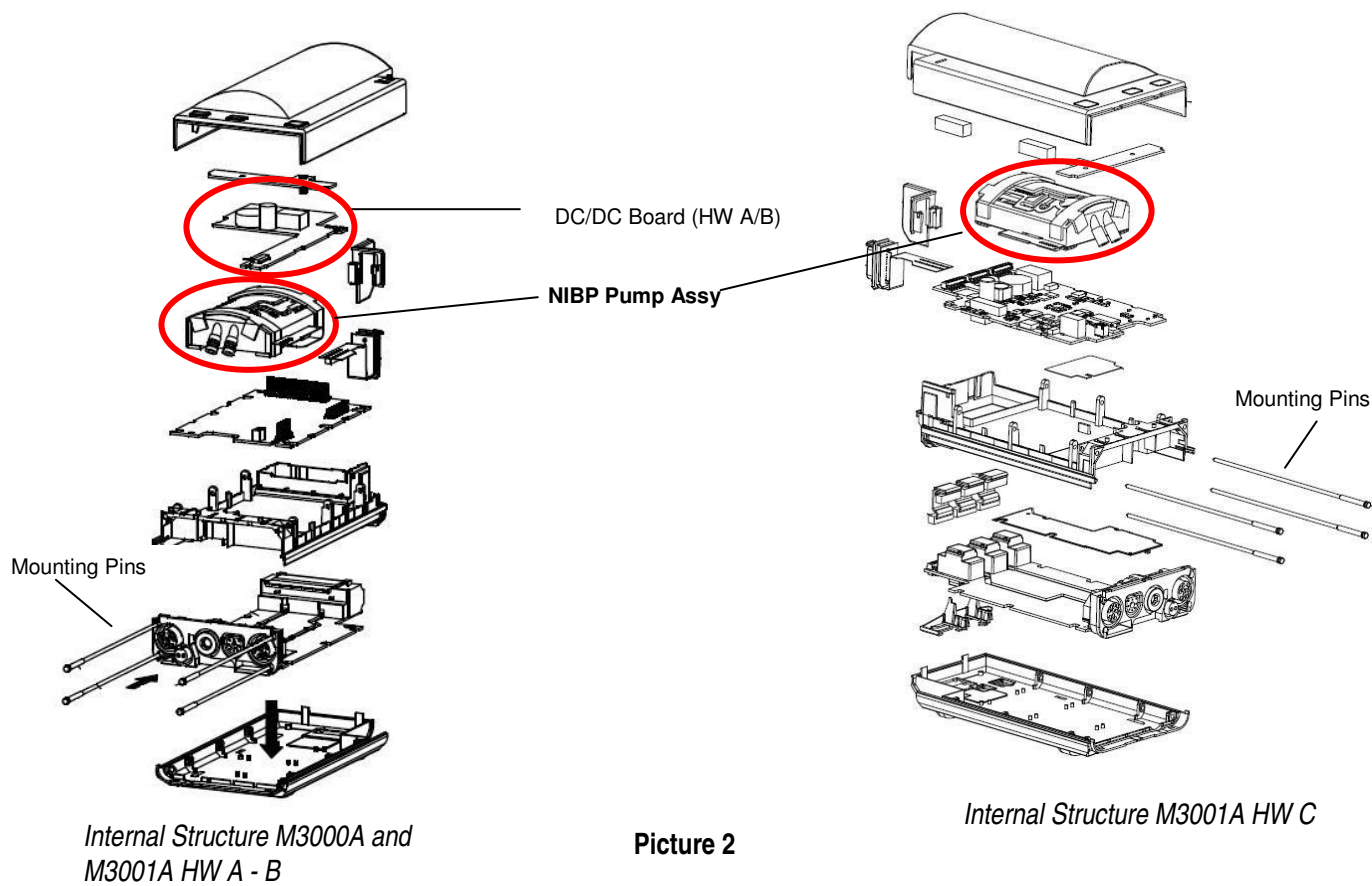
There are some differences in the repair procedures depending on the HW revision. Please follow the below mentioned steps to identify it. The serial number prefix and the option string defining the HW revision are labeled on the rear of the bottom Cover. The following picture shows the label of an M3001A and the table next to it helps you determine the Hardware revision



Picture 1

Hardware revision	S/N Prefix	Option String
HW A	DE227	--,C06,C12,C18
	DE441	A01, A01C06, A01C12, A01C18
HW B	DE441	A02, A02C06, A02C18
	DE512	A02, A02C06, A02C18
		A01, A01C06, A01C12, A01C18
HW C	DE610	A01, A01C06, A01C18
	DE632	A02, A02C06, A02C18
	DE717	A03, A03C06, A03C18

The internal structure has changed with the different HW versions. The M3000A and the M3001A HW A and HW B have a separate DC/DC board whereas HW C has this circuit included on the main board. The most important differences regarding the repair and the exchange are marked with red circles.



Picture 2

Ordering information for the NBP Pump

NOTE: If the demand for this part exceeds the forecast, there might be a delay in shipment.

Description	12NC	Orderable Part No
NBP Pump Assembly *)	451261020561	M3001-64500

*) The NBP Pump Assembly contains an application note on how to perform the exchange

Other Orderable MMS parts

Top Cover

Please make sure that you order the appropriate Top Cover for your MMS. Please refer to the option string as shown in Picture 1. In addition to the option string please check the language option, whether you require English Text or Symbol (international) version. On refurbished MMS a sticker with the Part number is placed over the option string.

Option String	Option String	Description	12NC	Orderable Part No
--, A01	M3001-68102/5 M3001-68114	MMS Top Cover 5ld w/o P/T Text FAST	451261016401	M3001-68010
C06, A01C06	M3001-68202/4/5	MMS Top Cover 5ld w P/T Text FAST	451261016411	M3001-68011
C12,A01C12	M3001-68302/4/5	MMS Top Cover 12ld w/o P/T Text FAST	451261016421	M3001-68012
C18,A01C18	M3001-68402/4/5	MMS Top Cover 12ld w P/T Text FAST	451261016431	M3001-68013
Empty, A01	M3001-68502/4/5	MMS Top Cover 5ld w/o P/T Sym FAST	451261016441	M3001-68014
C06, A01C06	M3001-68602/4/5	MMS Top Cover 5ld w P/T Sym FAST	451261016451	M3001-68015
C12,A01C12	M3001-68702/4/5	MMS Top Cover 12ld w/o P/T Sym FAST	451261016461	M3001-68016
C18,A01C18	M3001-68802/4/5	MMS Top Cover 12ld w P/T Sym FAST	451261016471	M3001-68017
A02	M3001-68108 M3001-68113	MMS Top Cover 5ld w/o P/T Text NELLCOR	451261016481	M3001-68018
A02C06	M3001-68203/8	MMS Top Cover 5ld w P/T Text NELLCOR	451261016491	M3001-68019
A02C18	M3001-68403/8	MMS Top Cover 12ld w P/T Text NELLCOR	451261016501	M3001-68020
A02	M3001-68503/8	MMS Top Cover 5ld w/o P/T Sym NELLCOR	451261016511	M3001-68021
A02C06	M3001-68603/8	MMS Top Cover 5ld w P/T Sym NELLCOR	451261016521	M3001-68022
A02C18	M3001-68803/8	MMS Top Cover 12ld w P/T Sym NELLCOR	451261016531	M3001-68023
A03	M3001-68107	MMS Top Cover 5ld w/o P/T Text MASIMO	451261016541	M3001-68024
A03C06	M3001-68207	MMS Top Cover 5ld w P/T Text MASIMO	451261016551	M3001-68025
A03C18	M3001-68407	MMS Top Cover 12ld w P/T Text MASIMO	451261016561	M3001-68026
A03	M3001-68507	MMS Top Cover 5ld w/o P/T Sym MASIMO	451261016571	M3001-68027
A03C06	M3001-68607	MMS Top Cover 5ld w P/T Sym MASIMO	451261016581	M3001-68028
A03C18	M3001-68807	MMS Top Cover 12ld w P/T Sym MASIMO	451261016591	M3001-68029

Other parts

Following parts are option independent:

Description	12NC	Orderable Part No
MMS MSL Connector Assy	451261016391	M3001-64050
M3015A Mounting pin	453563100081	5041-8114

Plastic Front Bezels

Description (Language)	12NC	Part Number
#A01/#A03 option C06/#C18 with P/T		
Front bezel #A01 #C06/18 – English (also Japanese, T. Chinese, S. Chinese, Turkish, Hungarian, Slovak, Korean)	453563462661	M3001-44101
Front bezel #A01 #C06/18 – French	453563462671	M3001-44102
Front bezel #A01 #C06/18 - German	453563462681	M3001-44103
Front bezel #A01 #C06/18 – Dutch	453563462531	M3001-44104
Front bezel #A01 #C06/18 - Spanish	453563462541	M3001-44105
Front bezel #A01 #C06/18 – Italian	453563462551	M3001-44106
Front bezel #A01 #C06/18 - Norwegian	453563462561	M3001-44107
Front bezel #A01 #C06/18 - Swedish	453563462571	M3001-44108
Front bezel #A01 #C06/18 – Finnish	453563462581	M3001-44109
Front bezel #A01 #C06/18 – Danish	453563462591	M3001-44111
Front bezel #A01 #C06/18 -Portuguese	453563462601	M3001-44114
Front bezel #A01 #C06/18 –Greek	453563462611	M3001-44115
Front bezel #A01 #C06/18 –Russian	453563462621	M3001-44117
Front bezel #A01 #C06/18 –Czech	453563462631	M3001-44119
Front bezel #A01 #C06/18 –Polish	453563462641	M3001-44120
#A01/#A03 option #C00 without P/T		
Front bezel #A01 #C00 - English (also Japanese, T. Chinese, S. Chinese, Turkish, Hungarian, Slovak, Korean)	453563462481	M3001-64101
Front bezel #A01 #C00 – French	453563462491	M3001-64102
Front bezel #A01 #C00 - German	453563462501	M3001-64103
Front bezel #A01 #C00 – Dutch	453563462511	M3001-64104
Front bezel #A01 #C00 – Spanish	453563462521	M3001-64105
Front bezel #A01 #C00 – Italian	453563462381	M3001-64106
Front bezel #A01 #C00 – Norwegian	453563462391	M3001-64107
Front bezel #A01 #C00 – Swedish	453563462401	M3001-64108
Front bezel #A01 #C00 – Finnish	453563462411	M3001-64109
Front bezel #A01 #C00 – Danish	453563462421	M3001-64111
Front bezel #A01 #C00 - Portuguese	453563462431	M3001-64114
Front bezel #A01 #C00 – Greek	453563462441	M3001-64115
Front bezel #A01 #C00 – Russian	453563462451	M3001-64117
Front bezel #A01 #C00 – Czech	453563462461	M3001-64119
Front bezel #A01 #C00 – Polish	453563462471	M3001-64120
#A02 option #C06/#C18 with P/T		
Front bezel #A02 #C06/18 – English (also Japanese, T. Chinese, S. Chinese, Turkish, Hungarian, Slovak, Korean)	451261005481	M3001-44201
Front bezel #A02 #C06/18 – French	451261005491	M3001-44202
Front bezel #A02 #C06/18 – Spanish	451261005521	M3001-44205
A02 option #C06/#C18 with P/T		
Front bezel #A02 #C00/12 - English (also Japanese, T. Chinese, S. Chinese, Turkish, Hungarian, Slovak, Korean)	451261005631	M3001-64201
Front bezel #A02 #C00 – French	451261005641	M3001-64202
Front bezel #A02 #C00 – Spanish	451261005671	M3001-64205

REPAIR PROCEDURE:

Please follow the disassembly and reassembly steps closely. Do not further disassemble the product past the point described in these procedures.

Tools Required: A thin-bladed screwdriver, ESD mat and wrist strap.

WARNINGS:

- Do not open the MMS while it is connected to a monitor.
- Parts inside the Instrument may be contaminated with bacteria.
- Protect yourself from possible infection by wearing examination gloves during this procedure.

Removing the Front Cover



Figure 1



Figure 2

Position the thin-bladed screwdriver in the small slot provided for this purpose. The front cover (Bezel) then clicks away from the MMS. Remove the front cover.

NOTE: There might be a resistance when removing the front Cover.

Removing the Mounting Pin



Figure 3

Step1. Position the MMS with the connectors facing towards you. There are four long mounting pins threaded into the MMS in each of the four corners under the cover. Locate the heads of the two long mounting pins on the top cover and only remove these.

Step 2 Use the thin-bladed screwdriver to lift the pins gently out, far enough to be removed manually.



Figure 4

Step 3 Remove the two pins and set them aside for refitting.

NOTE: Without these long mounting pins the MMS will not function properly.

Removing the Top Cover

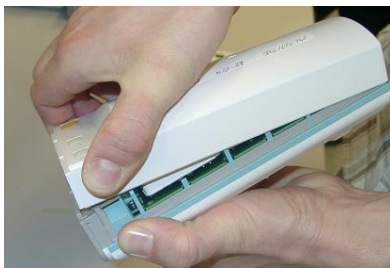


Figure 5

Begin by gently manually pulling away the top cover from the MMS. The top cover is press-latched at the MMS connector. There might be a resistance due to the rubber sealing. Remove it slowly, without hitting or touching the inside of the MMS.

Removing the DC/DC board

NOTE: The M3001A HW Rev C MMS (S/N prefix DE610/DE632xxxxx) doesn't have a separate DC/DC board anymore.



Figure 6

Note: This step only has to be done on M3000A and M3001A HW A/B

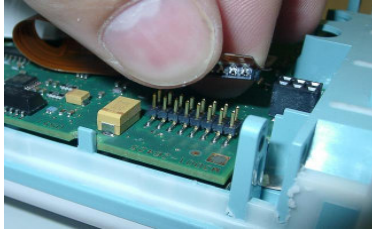
The DC/DC board is connected to the main board. Loosen the pin connection to the main board and remove the DC/DC board by gently lifting it up. Avoid touching the surface of the board. Set it aside where it is ESD protected.

Remove NIBP Pump



Picture 7

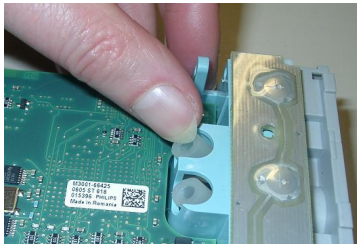
Step 1 Remove the pump by lifting it up. Set the pump aside. Remove also the old silicon tubes



Picture 8

Step 2: Remove the connector of the NBP Pump assembly. This might be a tight connection. Gently loosen the connector.

Refitting the new NIBP Pump



Picture 10

Step 1: Insert new silicon tubes. Make sure they are seated correctly by pressing them into their position. (The silicon tubes are part of the Pump assembly)



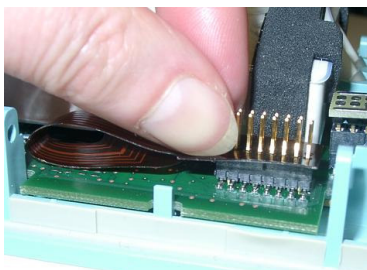
Picture 11

Step 2: Position the airways onto the already seated silicon tubes and press the airways firmly into the tubes.



Picture 12

Step 3: Make sure the airways have a tight connection to the silicon tubes



Picture 13

Step 4: Insert the connector of the NBP Pump into the multi pin connector of the main board. **Do not squeeze the flex.** M3001A HW A/B and M3000A have longer pins than the M3001A HWC. Press down the connector until there is no gap between connectors.

Refitting the DC/DC board

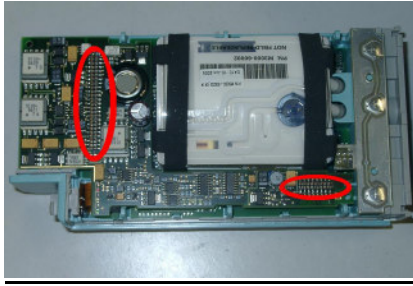


Figure 14

Note: This step only has to be done on M3000A and M3001A HW A/B

Position the DC/DC board and press it down gently. Make sure it is connected properly to both connectors indicated in the picture.

Refitting the Cover

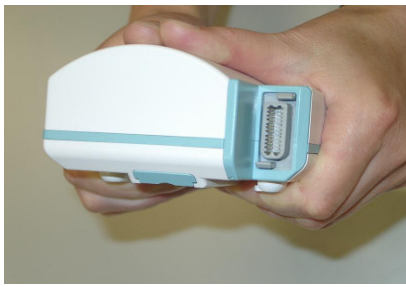


Figure 15

Step 1: Position top cover then press it back into place until a click is heard or there is no gap anymore between the two covers.

Step 2: The cover has a rubber seal, press the cover firmly together.



Figure 16

Step 3: Holding the bottom cover firmly in place, slide the two long mounting pins completely back into the MMS. Make sure there is no gap between top and bottom cover.

Refitting the Front Cover



Figure 17

To refit the front cover, press it back into place over the measurement connector hardware until you hear a click.

Final inspection



Figure 18

Perform a final inspection to ensure that:

- The MSL connector is positioned correctly
- There are no gaps between the MSL connector and the Cover
- There is no gap between the top and bottom Cover

Repair performed

NBP Pump Assy exchange

Required Testing

As described in the IntelliVue Service manual:

NBP Performance & Accuracy Test, Safety test, S1

Visual: V : P
Power On: PO : P
Performance: P : P
Safety S(1) : P/x1/x2

DISPOSING

Dispose the exchanged pump in accordance with your country's laws for equipment containing electrical and electronic parts.

RELATED DOCUMENTS: IntelliVue Service Guides

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